

## **Abstract**

5 The present invention relates to a contact-type sensor of an object, which is constructed by  
placing an elastic light material such as a sponge with certain thickness on the surface of the  
object and plastic membrane switches which are just like the keyboard of a computer are  
arranged below the sponge. When a robot equipped with the sensors meets a barrier, the  
sponge on the surface is pressed and the force can be absorbed by the sponge and transferred  
10 to the plastic membrane switches, just as the switches are pressed directly, therefore, the  
robot can perceive the barrier in one direction.